

Notice of Allowability

Application No.

09/909,025

Examiner

Leslie Wong

Applicant(s)

SCHUTZMAN ET AL.

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/25/2006.
2. ☒ The allowed claim(s) is/are 47-49, 51-63, and 66 and now renumbered as 1-17.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Paul D. Durkee on November 21, 2006.

The application has been amended as follows:

Abstract:

In the abstract, line 4, replace the word "comprises" with --includes--

Claims:

The existing claims will be replaced as follows:

47. (Currently Amended) A method of creating a data storage pool, comprising:
providing information for a plurality of storage resources in response to a user query;

assigning at least one storage property to selected ones of the plurality of storage resources in response to user instructions to define the data storage pool;

receiving a logical expression to identify respective ones of the storage resources that are available for a requested store operation based upon the storage properties assigned to the selected ones of the storage resources;

allocating selected ones of the identified storage resources for the requested store operation; [[and]]

receiving, prior to the step of allocating selected ones of the identified storage resources, a new storage property for the logical expression if a desired storage property is not present in the assigned storage properties; and

determining which ones of the identified storage resources have preferred characteristics, wherein the preferred characteristics include storage resources having multiple disk spindles.

48. (Previously presented) The method according to claim 47, wherein the logical expression includes at least one logical operator and at least two storage properties.

49. (Previously presented) The method according to claim 48, wherein the logical expression includes an amount of storage needed for the requested store operation.

50. (Canceled)

51. (Previously presented) The method according to claim 47, further including assigning a particular one of the at least one storage properties to a particular type of storage resource.

52. (Previously presented) The method according to claim 47, wherein the plurality of storage resources includes logical volumes.

53. (Previously presented) The method according to claim 47, further including receiving a user instruction to identify a storage resource as hand-off storage.

54. (Previously presented) The method according to claim 47, wherein the user query is generated by a storage administrator.

55. (Previously presented) The method according to claim 47, wherein the logical expression is generated by a database administrator.

56. (Currently Amended) An article, comprising:

a storage medium having stored thereon instructions that when executed by a machine result in the following:

providing information for a plurality of storage resources in response to a user query;

assigning at least one storage property to selected ones of the plurality of storage resources in response to user instructions to define the data storage pool;

receiving a logical expression to identify respective ones of the storage resources that are available for a requested store operation based upon the storage properties assigned to the selected ones of the storage resources;

allocating selected ones of the identified storage resources for the requested store operation; [[and]]

receiving, prior to the step of allocating selected ones of the identified storage resources, a new storage property for the logical expression if a desired storage property is not present in the assigned storage properties; and

determining which ones of the identified storage resources have preferred characteristics, wherein the preferred characteristics include storage resources having multiple disk spindles.

57. (Previously presented) The article according to claim 56, wherein the logical expression includes at least one logical operator and at least two storage properties.

58. (Previously presented) The article according to claim 57, wherein the logical expression includes an amount of storage needed for the requested store operation.

Art Unit: 2164

59. (Previously presented) The article according to claim 57; further instructions to include assigning a particular one of the at least one storage properties to a particular type of storage resource.

60. (Currently Amended) A system, comprising:

a processor; and

a memory coupled to the processor, the memory including instructions that when executed result in the following:

providing information for a plurality of storage resources in response to a user query;

assigning at least one storage property to selected ones of the plurality of storage resources in response to user instructions to define the data storage pool;

receiving a logical expression to identify respective ones of the storage resources that are available for a requested store operation based upon the storage properties assigned to the selected ones of the storage resources;

allocating selected ones of the identified storage resources for the requested store operation; [[and]]

receiving, prior to the step of allocating selected ones of the identified storage resources, a new storage property for the logical expression if a desired storage property is not present in the assigned storage properties; and

determining which ones of the identified storage resources have preferred characteristics, wherein the preferred characteristics include storage resources having multiple disk spindles.

61. (Previously presented) The system according to claim 60, wherein the logical expression includes at least one logical operator and at least two storage properties.

62. (Previously presented) The system according to claim 60, wherein the logical expression includes an amount of storage needed for the requested store operation.

63. (Previously Amended) The system according to claim 60, further including instructions to

Art Unit: 2164

assign a particular one of the at least one storage properties to a particular type of storage resource.

64. (Canceled)

65. (Canceled)

66. (Previously Presented) The method according to claim 47, wherein the logical expression includes a storage property not assigned to any of the storage resources, and further including:

receiving an identification of a first one of the plurality of storage resources having the unassigned storage property; and

allocating the first one of the storage resources based upon the logical expression.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (571) 272-4120. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES RONES can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2164

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Leslie Wong
Primary Patent Examiner
Art Unit 2164

LW
November 22, 2006